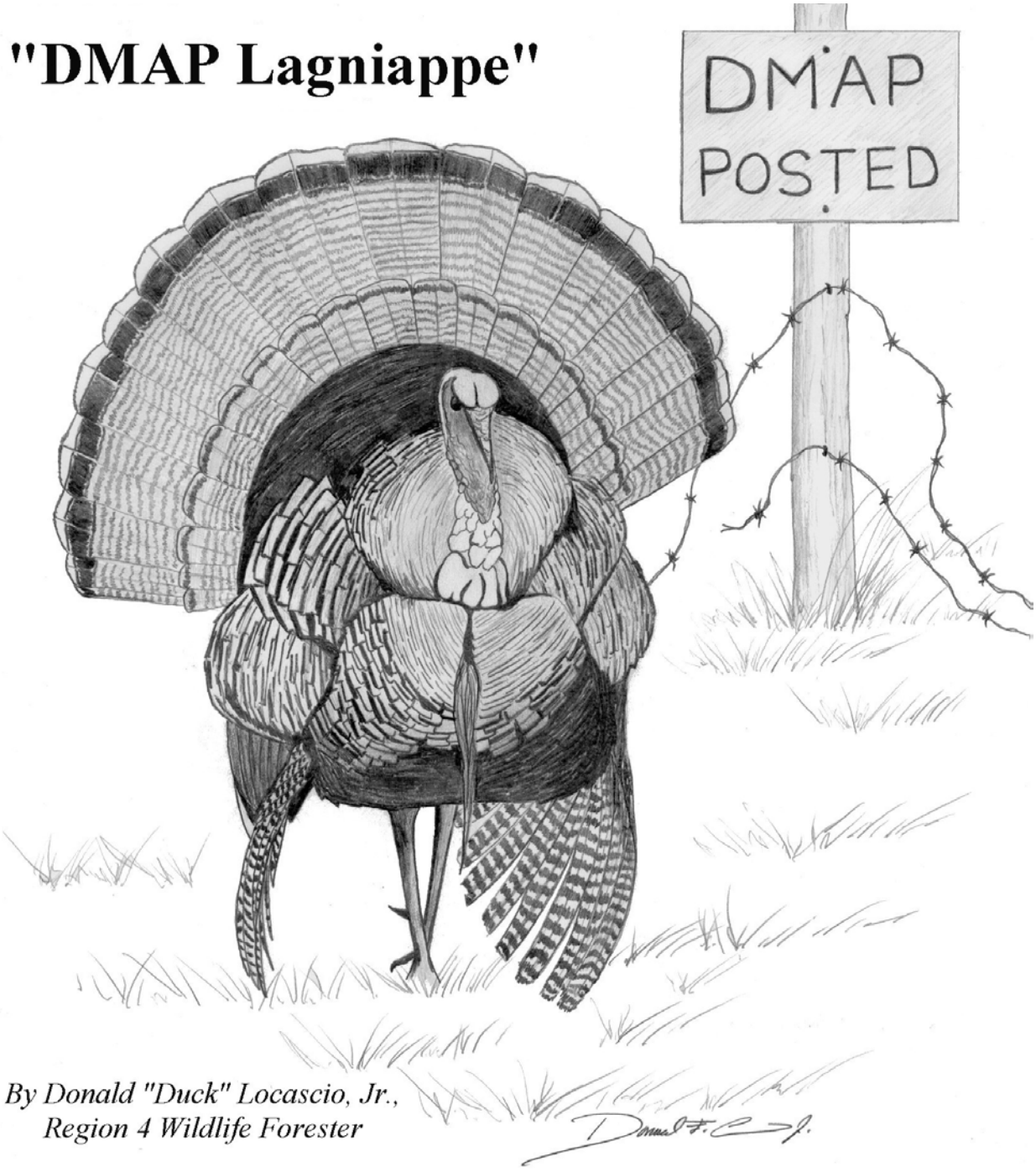
DMAP Newsletter

Volume 4, Issue 1 Louisiana Department of Wildlife and Fisheries March 2001

"DMAP Lagniappe"



By Donald "Duck" Locascio, Jr.,
Region 4 Wildlife Forester

INTRODUCTION

Louisiana deer and duck hunters finally enjoyed some perfect hunting weather for the first time in three years. North Louisiana deer hunters even had a couple of days of tracking snow. Reports indicate deer movement was good during the first significant snow (5") in years. Poor mast crops in some areas altered normal deer movement and hunters relying on stands in open hardwood timber may not have fared as well as those hunting thickets with a good evergreen browse component (honeysuckle & dewberry). Food plots that survived the droughty planting conditions received heavy use as early frost reduced natural browse availability.

There were a number of reports of exceptional bucks (like the one featured below) harvested this season. On the other hand, many hunters with high expectations came up empty-handed. As can be seen by Chris Clayton's report "*Culvert Buck*"(page 5), there may be some truth to the saying that big bucks "just go in a hole in the ground" when hunting season starts. If this unusual behavior is actually common place, sales of Valium will skyrocket in serious buck hunting circles. If the article "*Old Dog with a New Management Trick*" (page 11) is any indication, the trend toward sound deer management practices in Louisiana continues at all levels. Analysis of long-term Department statewide harvest survey data illustrates the trend of increasing doe harvest. Over the past 10 years, the total statewide deer harvest and the proportion of does in the harvest each have increased about 30%. Does now comprise about 40% of the statewide harvest.

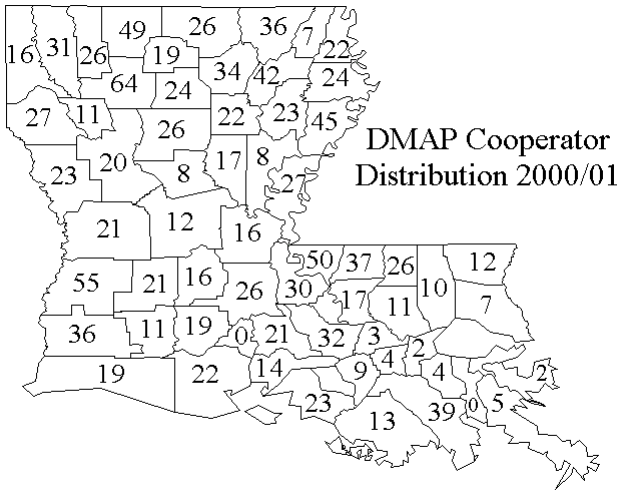
Killed by Tammy Lemoine, 250 lbs, 13 pts.
Corbett H.C., Avoyelles Parish

FOR MORE INFORMATION ON THE DEER MANAGEMENT ASSISTANCE PROGRAM, VISIT THE LDWF WEBSITE (WWW.STATE.LA.US) OR PHONE A REGIONAL WILDLIFE OFFICE.

2000-2001 DMAP ENROLLMENT

During the 2000-2001 deer season, 1,335 clubs/landowners voluntarily participated in DMAP, a 1% decline from last year. DMAP fees paid to the LDWF conservation fund totaled $160,000.

At least one DMAP cooperator was located in 61 parishes. The top five parishes in total DMAP cooperators were Bienville (64), Beauregard (55), West Feliciana (50), Claiborne (49) and Tensas (45). East Carroll Parish, which is 90% agriculture, probably had the highest percentage (80%) of eligible woodland habitat in DMAP. This solid participation in East Carroll has led to a healthy deer herd (See *Area 4 Breeding Study*). Seven relatively new DMAP cooperators are located in West Carroll Parish (Area 5) where deer densities are low but growing.



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DEER RESEARCH/BIOLOGY

AREA 4 BREEDING BIOLOGY STUDY

By Larry Savage, LDWF and Shannon Anderson, ULM

Area 4 deer hunting zone contains all of East Carroll and Richland Parishes and the agricultural (eastern) portions of Ouachita and Morehouse Parishes. This deer hunting Area was created in 1984 when the deer season was shortened and converted to still-hunting only due to the general lack of woodland habitat and the low deer populations found in the open-land portions of this region. Area 5 (West Carroll Parish), which supports one of the lowest deer densities in the state, is located in the geographic center of Area 4.

Habitat in Area 4 is largely agriculture with less than 10% in remnant bottomland hardwood tracts that are scattered across the landscape where wetlands prevent farming activity. The largest bottomland forests remaining are Russell Sage, Ouachita, and Bayou Macon Wildlife Management Areas.

In recent years, the deer habitat in this region of the state improved significantly because of reforestation under WRP and CRP. The pockets of deer habitat that remain in Area 4 are some of the most productive in the state due to a combination of fertile soil, bottomland hardwood forests, adjoining agriculture, and sound deer management practices. Deer are very mobile in this predominantly agriculture setting and routinely cross multiple landowners in search of soybeans, acorns, or refuge from flooding. Management potential is best where landowners work together.

The majority of landowners and clubs practice quality buck management where young bucks are passed up and does are harvested liberally (1.3 females/1 male). Depending on the parish, participation in DMAP ranges from 60% (Richland) to 80% (E. Carroll) of eligible habitat. Since large-scale DMAP participation began in the mid-1980's, the percent and harvest of adult buck has steadily increased (Figure 1). Buck harvest on DMAP lands in East Carroll now is comprised of 57% or more 3.5 year old and older animals. This transition to a successful quality deer management program was accomplished without mandatory antler restrictions.

As hunters focus their efforts on harvesting mature bucks, knowledge of the timing and duration of the rut became very important. During the mid-1990's, hunting seasons were extremely warm and hunters did not see a lot of daytime rut activity from mature bucks. Hunters became concerned that the Area 4 deer season missed the peak of rutting activity.

The last large-scale breeding study conducted in Louisiana was done in the early 1960s. Since that time, major changes in habitat (agricultural clearing) and deer herd conditions (quality deer management) have occurred. To determine current conditions, LDWF began a three-year breeding study in conjunction with the Biology Department at the University of Louisiana at Monroe and volunteer DMAP Cooperators. Graduate student, Shannon Anderson, is currently analyzing and compiling these data for a Masters Thesis.

Buck activity was monitored in 1998 by sensor cameras to determine scraping behavior. Breeding dates were determined by measuring fetuses and backdating to conception dates. One hundred and two does (102) were examined between 1997 and 1999 following special collections and from road-killed animals. Major findings are presented in Table 1 and Figure 2.

Overview of Results

- Fetus to doe ratios for Area 4 were 1.9 fetuses/adult doe and 1.2 fetuses/yearling doe. These are the highest ever recorded for Louisiana. These high reproductive rates indicate that **Area 4 DMAP doe populations are very healthy**. Good health and efficient reproduction are due to excellent nutrition and the presence of a strong mature buck component. Both of these are the results of a long-term commitment (15 years) to quality deer management practices, particularly liberal doe harvest.

Table 1. Area 4 Productivity Index 1997-2000

Parish	Adult Female (2.5+)		Yearling Females (1.5)	
	No.	Fetuses per Doe	No.	Fetuses per Doe
E. Carroll	31	1.9	3	1.0
Morehouse	31	1.8	5	1.0
Richland	17	1.8	6	1.3
Ouachita	7	1.9	2	1.5
Area 4	**86**	**1.9**	**16**	**1.2**

- Pre-rut scraping activity peaked between mid-November and mid-December (Figure2). This is the time when bucks become serious about scrapes and rubs and will keep them fresh, therefore the period affording hunters the best opportunity to hunt scrapes and try rattling, grunts, and scents.

Scraping Behavior of Mature Morehouse Parish Buck (*Photo Courtesy of ULM Biology Department)*

- Breeding peaked the last week in December (Figure 2). Breeding dates ranged from November 15 to January 28. During this period, dominant bucks are tending does. It is the non-breeding bucks that continue to visit and mark scrapes.
- The distribution of breeding dates overlaid on the 2001 hunting seasons:
  - Early Archery (October) - 0%
  - 1st Muzzleloader ---------- 1%
  - Modern Gun ---------- 91%
  - 2nd Muzzleloader ---------- 4%
  - Last 2 Weeks Archery --- 4%
- Breeding dates in Richland and Ouachita Parishes tend to be slightly earlier than the rest of Area 4. This occurs because these regions adjoin the pinelands where breeding is earlier, Richland Parish was not subject to historic flooding (i.e. similar to uplands), and restocking source deer were from the pinelands of west central Louisiana.
- On Ouachita Wildlife Management Area, fetus to doe ratios were 2.3 for 4 adult does and 2 for one yearling doe – the highest breeding rate of any collection site in the Area 4 study. High reproduction is the foundation of the high quality deer herds found on LDWF public WMA system statewide.

Figure 1

% ADULT (2.5+) BUCKS HARVESTED--AREA 4 DMAP

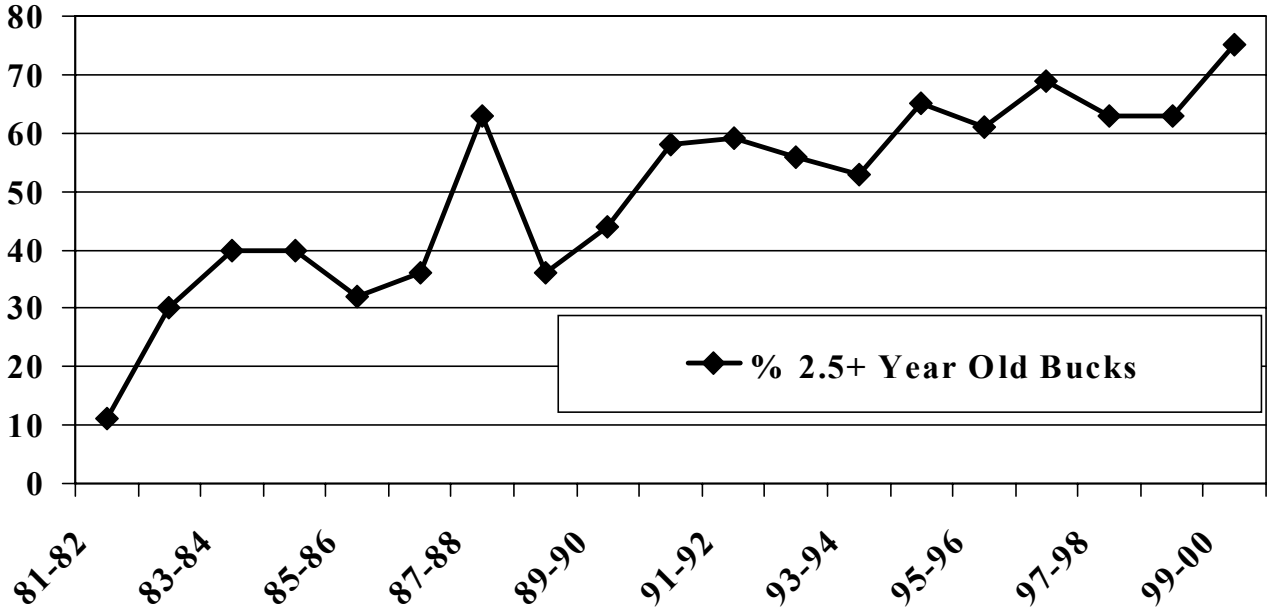
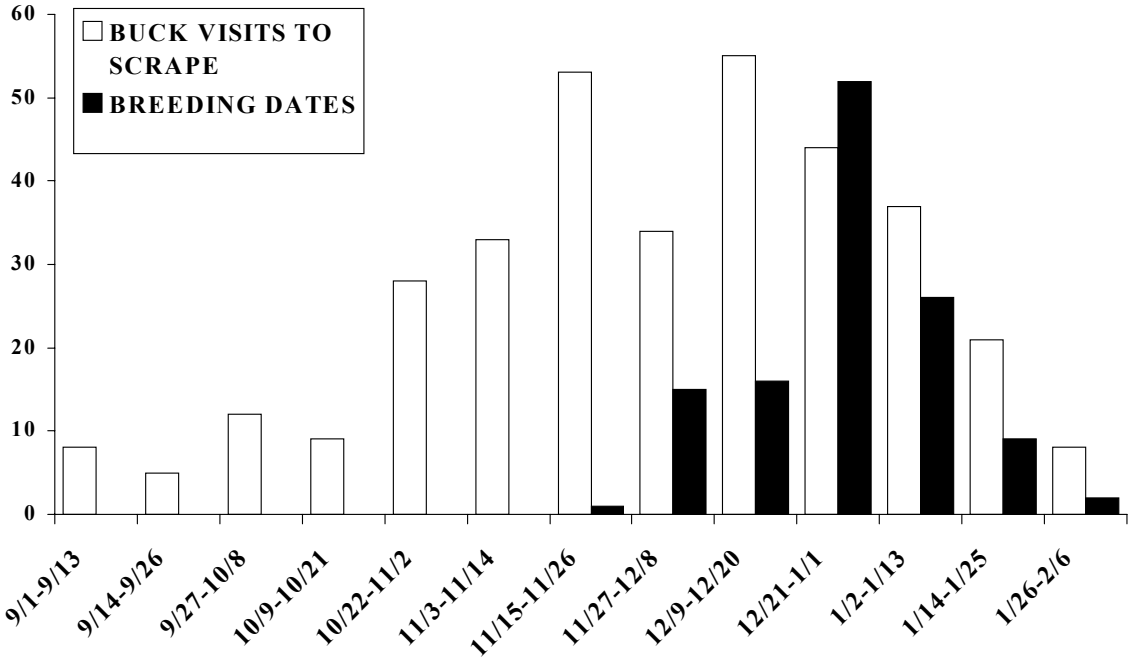


Figure 2

SCRAPING ACTIVITY AND BREEDING ACTIVITY
DMAP -- Area 4



AREA 2 BREEDING BIOLOGY STUDY

By Larry Savage, LDWF

Jeremy White, ULM graduate student, is in the process of analyzing over 500 reproductive tracts collected by Area 2 DMAP volunteers. Preliminary results from this 2-year study will be presented in the fall newsletter. LDWF and ULM researchers would like to thank DMAP volunteers for their contribution to this study. Without their exceptional effort, a study of this magnitude would not have been possible.

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(Top left: Mike Berg [LDWF], Dr. Don Reed [LSU Coop. Ext.], Dr. Kim Tolson and Chris Clayton [ULM], Emile LeBlanc and Tony Vidrine [LDWF], Shannon Anderson [ULM]; Howard Nass [GEC], Vic Blanchard [Wilbert & Sons], and Larry Savage [LDWF])

24TH ANNUAL SOUTHEAST DEER STUDY GROUP MEETING

Above is the "Louisiana team" at the 24th Southeast Deer Study Group (SEDSG) meeting in St. Louis. SEDSG is held annually to present current research findings and "air" hot deer management issues (formally and informally). The majority of the 375 people attending were state, federal, university, industry and private-land deer biologists from across the southeast.

ULM Biology Professor, Dr. Kim Tolson, presented the final results of the Area 4 deer breeding biology study. At the conclusion of her presentation she extended a hardy thanks to the DMAP Cooperator volunteers that assisted in this study by providing access to their property, guidance on the property, work facilities and food for the LDWF/ULM research crew.

LDWF biologists Mike Berg (Lake Charles), Tony Vidrine (Opelousas), and Emile LeBlanc and Larry Savage (Baton Rouge) feverishly took notes to bring back practical deer management information to other LDWF biologists and wildlife foresters that work on deer and deer habitat management in the state. Annual attendance at the SEDSG is an effort by LDWF biologists to provide LA citizens (including DMAP cooperators) with the "latest and greatest" in deer management technical assistance.

THE CULVERT BUCK

By Chris Clayton, ULM Graduate Student

I am a wildlife biology student working on a master's degree at the University of Louisiana at Monroe. I live and work on Lonewa, a 2,700 acre hunting club, where I conduct research into the movement behavior of white-tailed deer. Located in Ouachita Parish, Lonewa is a DMAP unit that practices trophy buck (4.5 years old and older) management. Landowners harvest a liberal number of does and have strict controls on buck harvest.

While observing deer, I have witnessed many unbelievable sights, but none hold a candle to what a fellow student, John Hanks, and I saw in mid-October last year. While driving down an interior gravel road, we noticed a dog-sized animal disappear into the right side of a 32" culvert well ahead of us on a long straightaway.

Photo Courtesy of "Big" Chris Clayton

Assuming it to be a coyote, I told John to get his gun ready. I had recently trapped eight coyotes and was eager to take another. With the running truck parked on top of the culvert, I told John to take a stand with his gun on the right end while I flushed out the coyote by blocking the left end. Before I could get into position to see inside, we heard a PING-PING-PING-PING noise coming from inside. Head first out of John's end of the culvert came a mature buck with

a huge 20" rack. It stood up and looked John in the eye at extremely close range before running off into the brush. Needless to say John was speechless, but his eyes, which looked as big around as the culvert, said it all. When he finally spoke, he stuttered – "you're lucky I didn't shoot the first thing I saw". My only reply was, "you're the lucky one because I would probably have had to find a new place to live----perhaps with you and your wife."

A close inspection of the culvert revealed deer tracks throughout its muddy interior. Apparently the buck had squatted down and belly-crawled backwards (the wide rack prevented it from turning around) into the culvert, presenting us with the initial "coyote-like" profile. Was the buck taking refuge from our sudden appearance? If not, was he simply following his normal routine of taking a mid-day siesta in the cool "microenvironment" of the culvert. Either way this behavior shows the incredible adaptability of mature white-tailed bucks.

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HABITAT

INDIRECT IMPACTS OF SUPPLEMENTAL DEER FEEDING

By Larry Savage, LDWF

Photo by Ken Cook -- Seven Fat Bienville Parish Raccoons

The practice of supplemental feeding white-tailed deer with corn or pelleted rations has increased significantly over the last few years in Louisiana. A survey of DMAP lands in 1998 revealed that 75% of the cooperators bait or feed deer. Corn was the most often used feed. Deer are the "target" animals of feeding/baiting in most cases. However, feeding stations are used by a wide variety of "non-target" wildlife species both day and night. Studies with remote cameras have helped document heavy nighttime use by some animals. Two Texas studies have shown that over 50% of all supplemental feed goes to non-target wildlife.

The food value of corn and other supplements attracts raccoons, squirrels, rabbits, wild turkeys, quail, crows, songbirds, feral hogs, opossums, flying squirrels, cotton rats and wood rats.

The pattern of frequent and predictable use of feeders by this group of animals quickly attracts the attention of another group--**predators**. Discovery Channel nature program viewers will recognize this as the "water hole strategy" where lions lounge around a water hole during the dry season waiting for prey animals to come to them. This approach significantly increases their efficiency at catching prey. Predators that frequent corn feeders (and often not seen) are raccoons, coyotes, bobcats, gray foxes, hawks, owls, and snakes (and human poachers – see Operation Game Thief p.12).

Photo by Ken Cook – Bienville Parish Bobcat On Bait Pile Patrol

Wildlife researchers are starting to investigate the subtle impacts of supplemental feeding on target and non-target wildlife. Find below a review of two recent studies.

Cooper, Susan M. and Tim F. Ginnett. 2000, *Potential effects of supplemental feeding of deer on nest predation*--Wildlife Society Bulletin 28(3): 660-666.

Texas researchers used artificial nests to measure relative predation rates that ground-nesting birds (quail, turkeys, and songbirds) may be subjected to when deer are provided supplemental feed during spring. In theory, the presence of feeders would produce a combination of enhanced survival and concentration of raccoons and other small carnivores. Using chicken eggs, researchers constructed artificial nests duplicating the nesting behavior of Rio Grande turkeys. Tests were conducted over three years with half of the nests placed in the vicinity of feeders and the other half in similar habitat with no feeders. **Predation rates were 86% at sites with feeders and 58.5% at sites without feeders.** Automatic cameras at nests photographed raccoons and striped skunks eating eggs. The pattern of eggshell breakage indicated that predation was due to raccoons (64.7%), skunks, foxes, or bobcats (11.7%) and unknown (23.6%). Researchers recommended that: **(1) deer feeders should not be placed in good wild turkey nesting habitat and (2) deer feeders should be left empty in springtime when the**

turkeys have eggs and small poults, which are susceptible to predation by raccoons.

Brown, Cristy and *et. al*. 2001. *White-tailed deer and non-targeted species usage of three supplemental feeds on an intensively managed property*--24th Southeastern Deer Study Group Meeting – St Louis, Mo.

This study tested the use of deer and non-target wildlife on two supplemental feeds, corn and rice bran, on a 3,500 acre East Texas property managed for trophy bucks. Motion/heat sensitive cameras were used to monitor 18 feeding stations for two weeks. Cameras recorded visits by deer, raccoon, opossum, crow and feral hogs. Of the total animal visits, **79% were by non-target wildlife** and 21% by deer. Four feeders used by hogs had fewer visits by deer (<1% deer) than nine feeders not used by hogs (31.9% deer). This suggested deer avoidance of feeders frequented by feral hogs.

These studies add to the growing body of evidence that there may be serious side-effects of supplemental feeding/baiting on both deer and non-target wildlife.

- **Disease** -- Supplemental feeding has been linked to the spread of tuberculosis in Michigan deer, chronic wasting disease in western elk and deer, and brucellosis in western elk and bison.
- **Toxins** --A 1998 LDWF study detected high aflatoxin levels in deer feeders containing corn from agricultural fields. While high aflatoxin levels may not impact deer, the effect of this deadly toxin is not well understood for wild turkeys and other birds.
- **Increase and concentrate predator populations** -- Heavy year-round supplemental feeding may increase the health and population numbers of non-target animals (raccoons), particularly during years of low mast crops.
- **Increase feral hog populations --** Hogs are direct competitors to deer and other wildlife particularly during years of low mast crops.
- **Ecological damage --** Studies have shown that supplemental feeding does not reduce heavy browsing of native forage during the early growing season. High populations of deer can overbrowse desirable plants to the extent plant species, birds, small mammals and reptile populations can be reduced.
- **Starvation –** Feeding during stress periods such as flooding can alter normal escape behavior. This can result in large-scale losses of animals as well as long-term damage to the habitat. This was witnessed on some Mississippi River islands in 1973.

LDWF RECOMMENDATIONS:

JUST SAY NO TO SUPPLEMENTAL FEEDING/BAITING WITH CORN.

IF YOU CANT STOP YOURSELF, THEN:

1. Use only certified aflatoxin-free corn.
2. Frequently move feeders to reduce the risk of diseases and parasites.
3. Terminate feeding program by February 15th each year.

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SPRING FLOODING AND DEER

By Larry Savage, LDWF

Louisiana is known as the Bayou State and is perceived by outsiders to be nothing but swamps, cypress trees, and alligators. The low regions, including the alluvial lands and coastal swamps and marshes, comprise about 20,000 square miles, or only half the area of the State.

Mother Nature obviously programmed deer to cope with changing water levels since our most productive deer habitat is in the alluvial bottomland habitat along our major river systems. Research along the Mississippi River by LDWF (Red River WMA) and by Mississippi State University (Davis Island) has clearly demonstrated that deer routinely swim miles of backwater to take refuge during periods of high water and then return **immediately** after the backwater resides. A RRWMA doe left the protected side of the levee and swam one mile of backwater to return to her home territory on an exposed ridge before the water had completely receded.

Deer also routinely swim the Mississippi River. One old-timer from Concordia Parish tells the story of his hunting party pursuing a big buck across the Mississippi River with dogs in boats. While he waited on the Louisiana side where the deer entered the water, he watched his party land and enter the woods with the dogs in Mississippi. In the meantime, the big buck reappeared downstream and returned back across the River to Louisiana.

Deer currently (as of March 2001) are pushed out of the Ouachita River and Lafourche Bayou bottomlands by flood stage waters that threaten to reach record levels later this spring. DMAP units in this area of the state are concerned about the health and safety of their deer herds.

The impact of flooding depends on the depth, timing and duration of the high water and deer herd health and habitat conditions.

DMAP data has been used to identify two times in two different locations where flooding has seriously impacted deer herds. In both cases, the problem was not survival of adults, but high fawn mortality due to summer flooding.

(1.) Lafourche Swamp (Ouachita and Richland Parishes) in 1983

In December 1982 backwater levels in Lafourche Bayou exceeded flood stages and did not recede again until July 1983. DMAP units in this area were practicing **traditional deer management** where all legal bucks were harvested and does were harvested at a modest level. At this time, DMAP (either-sex harvest) was relatively new to these clubs. Eighty percent of their annual buck harvest was yearlings (1.5 year

old) with their first set of antlers. A high harvest of young bucks, like this, depends on **good fawn production each year.**

Following the 1983 summer flood, the 1984 deer season for the Lafourche Swamp clubs was a disaster. Antlered buck kills were down by 65% - 70%. Several years later, a close review of DMAP records along with Russell Sage and Ouachita WMA records clearly showed that late flooding caused a significant loss of fawns in 1983. Loss of a fawn crop is often difficult to detect and there is a "lag-time" before it shows up as a reduced buck kill in the harvest data. In this case it became apparent in 1984. With the memory of the 1983 flooding all but gone, most club members attributed the low buck kill on "killing too many does". In reality, a balanced doe harvest is the best way to improve fawn survival during these unusual summer flood events.

(2.) Mississippi River in 1993

Tim Evans, Assistant Wildlife Manager-Anderson Tully Company, describes below in "Lost Generation" the impact of summer flooding on quality buck management lands.

THE LOST GENERATION: ASSESSING THE IMPACT OF THE 1993 MISSISSIPPI RIVER FLOOD ON FAWN SURVIVAL

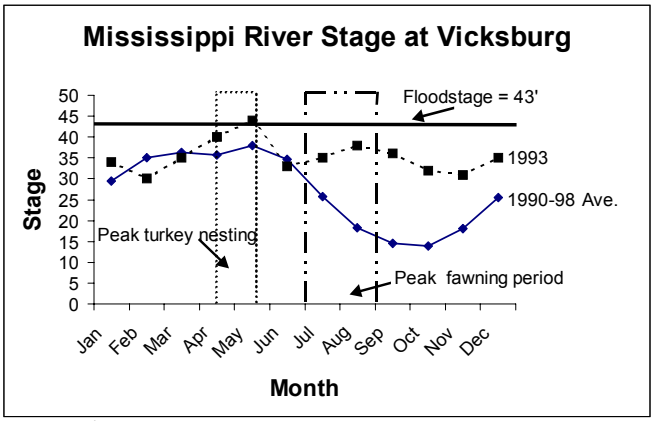
By Timothy L. Evans, Assistant Wildlife Manager, Anderson-Tully Company and Larry Savage, LDWF

Throughout the decade of the 90's the lower Mississippi River exhibited a pattern of abnormally high water in late winter and spring then low water in late summer and fall. While this pattern wrought havoc with turkey reproduction in the Delta, it was seen as having little or no impact on the deer population. However, following the heavy rains and unprecedented flooding in the Midwest in 1993, the river abandoned this pattern; remaining 15 to 20 feet above normal at Vicksburg from late July until early November. Based on data collected from Anderson-Tully (ATCO) and other privately owned Delta and Batture lands in Arkansas, Louisiana (DMAP data), and Mississippi, lactation rates in the1993 deer season fell to 48% on average, down from 65% (1990-97). Immediate concerns arose regarding the possibility that the 1993 fawn crop may have been lost due to the flood. Over the next three years, the age distribution of harvested bucks cycled through a series of peaks and troughs as the loss of the 1993 fawn crop evidenced itself in each successive year's harvest. The result was increased harvest pressure being exerted upon the remaining age classes of bucks. Amazingly, total buck harvest never wavered, even in the wake of Mississippi's four-point law (enacted in 1995).

While convinced of the 1993 floods impact, the harvest data was still only anecdotal evidence. Only through cohort (a group of deer born the same year) analysis did the real impacts become clear. Cohort tables based on buck, doe and total harvest for the period of 1990-1997 showed that hunters had already harvested more deer, both bucks and does from the 1994 (and in some cases the 1995) cohort than from the 1993 cohort in spite of having one to two less years to harvest from it. This confirmed concerns of extremely high fawn mortality as indicated by the low lactation rates of 1993.

The basic take home lesson from all of this is:

- While normal spring floods appear to be relatively benign from a deer survival standpoint, **late summer flooding, even at moderate depths, can be highly detrimental to fawn survival.**
- Total buck harvest (especially in herds managed under the principles of Quality Deer Management) is a poor indicator of fawn survival. Hunters tend to maintain harvest levels by shifting their pressure to other age classes. Those other age classes are not always available for harvest under traditional management where yearlings bear the brunt of each years harvest pressure.
- The best early indicator of fawn survival is adult doe lactation rate.
- While age class distribution of harvested bucks and the cohort tables based on that distribution are indicators of poor fawn survival, they are only available one to three years in the future when those deer are harvested.



Proc. 22nd annu. Conf. Southeast Deer Study Group, accepted 1998, presented at Fayetteville, AR

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Temporary crowding caused by summer flooding can effect fawn survival in two important ways. 1) Over browsing can result in poor nutrition for pregnant does. Good nutrition during the last third of pregnancy is a significant factor in fawn survival. In the case of poor nutrition, fawns born with low birth weights have a much lower survival rate. 2) A critical aspect of the fawning process is the establishment of an isolated fawning territory where pregnant doe can bond with and protect newborn fawns. Social stress caused by crowding can interfere with this process when does are forced to give birth outside their normal home range. Particularly stressed are young does trying to establish their first fawning territory. This may lead to abandonment that

results in 100% mortality of these fawns.

LDWF Recommendations for Flood Prone Habitat

1. Maintain a healthy deer herd by harvesting sufficient does to keep deer numbers balanced with the natural year-round food supply. Healthy deer are more resilient and can recover faster from environmental stress than unhealthy deer.

- **DO NOT reduce doe harvest quotas** when floodwaters threaten. Human nature tends to lead to overprotection. Proceed with recommended annual doe harvest.
- **Harvest does early.**
- **Harvest does randomly regardless to their age.** Clubs often mistakenly concentrate on removing "old barren does". Movement patterns that prove to be successful at avoiding floodwaters are learned by mature does and passed down to daughters and granddaughters. Retaining some of this "deer knowledge" improves flood response behavior. Retaining a 30% to 50% mature doe (3.5 + years old) component is important.

2. Maintain healthy habitat conditions by implementing a long-term timber management plan.

- Regularly scheduled timber harvests improves and sustains food and cover conditions for deer. Hard mast (red oaks, white oaks and pecans) and soft mast (persimmon and red mulberry) components must be retained or increased in the forest.
- A critical element of the forest management plan is harvesting a sufficient number of does to allow natural/artificial forest regeneration. Over browsing eliminates desirable oak seedlings.

3. **Work with neighbors to form deer management association**. Of particular interest would be incorporation adjacent lands that are protected from flooding.

4. Keep good records. Detailed harvest records are essential to accurate interpretation of the impact of environmental stress factors due to the "lag time" effect. This is particularly true with quality buck management programs.

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PEOPLE

Quality Deer Management (QDM) In Louisiana

By LDWF Research Section

"Quality Deer Management" is a term frequently heard among deer hunters today. However, it is readily apparent that the term means different things to different people. "Quality Deer Management is a management philosophy/practice that unites hunters, landowners, resources professional, and the public in a common goal of producing biologically and socially balanced deer herds within existing environmental, social, and legal constraints. QDM, in part, is the use of restraint in harvesting young bucks combined with an appropriate antlerless deer harvest to maintain a healthy deer herd in balance with the habitat. Involvement in QDM extends a hunter's role from mere consumer to manager." (QDMA official definition) Under this type of program, the antlered buck harvest is restricted in some fashion and the doe harvest is increased to a level that lowers the overall deer herd to within habitat carrying capacity. An essential element of QDM is knowing the physical condition of the 1 ½-year age class. Once this is established, a plan can be developed that would protect the majority of young bucks, particularly those with good body weights and antler development.

It differs from a Trophy Buck Management Program in the age structure of the bucks harvested. Trophy programs are designed to grow bucks to their maximum potential for the habitat and the age structure of bucks harvested is usually 4 2 to 7 2 years. The true trophy program requires a serious long-term commitment as well as some extra money for the necessary habitat work.

A lot of Louisiana deer hunters are familiar with at least one aspect of the deer programs in Mississippi and Arkansas -- mandatory antler restrictions. Mississippi also reduced the number of bucks a hunter could take by 40% (to 3). (Arkansas already had a 3-buck limit.) In addition, more either-sex hunting opportunity was offered. This type of deer management program is one approach to shift the age structure to older bucks.

The initial results of the Mississippi and Arkansas programs have shown that young deer are being moved up into the older age classes and the doe harvest has increased in the states, but there are concerns raised as a result of these statewide programs. Both states have found that there could be problems from high grading the 1 2 -year age class as well as over harvest of the deer population in areas with low quality habitat.

The problem of high grading has always been a concern among Louisiana biologists regarding mandatory antler regulations. Antler regulations must protect the majority of young, 1 ½-year old bucks in order to achieve good recruitment into the 2 2 -year age class. The four-point regulation like Mississippi would work in some areas in Louisiana, **but** would not protect the best 1 ½-year old bucks on our better habitat. Consequently, statewide regulations are probably not the best approach.

There are other ways to increase the age structure within the buck population of a deer herd. Shorter seasons would reduce the hunting pressure and cause more deer to move up into the older age classes. Many of the mid-western states like Illinois and Ohio have very short gun seasons and the main deer hunting opportunity is with bow and arrow. Illinois has a solid reputation for a place to go and kill a trophy class deer with a bow. In Louisiana, the public has resisted this approach. In fact, over the past 15 years, the modern firearm season for deer has increased 12-24 days

depending on the Area and 14 days of muzzleloader hunting were added.

The annual bag limit on the number of bucks can be reduced. Mississippi reduced the limit on the number of antlered bucks to 3 while Kentucky has a one buck limit. Based on long-term LDWF data, a 3-buck limit would result in a minimum 5% fewer bucks being killed.

Setting seasons prior to the rut, when deer are not too active, is also another way to achieve an older age class of deer. This was done on the Thistlewaite Wildlife Management Area. Within just a few years, more older bucks were seen and taken on the either-sex hunts. However, the number of bucks taken during the bucks only season was drastically reduced and many hunters expressed dissatisfaction with the buck season.

DMAP has shown that both quality and trophy class deer can be produced in this state without mandatory statewide antler restrictions. Under DMAP, cooperators are allowed to choose 1 of 3 management objectives. "The increased doe harvest takes the place of the reduced buck harvest. Young (1 2 -year old) bucks are allowed the opportunity to become 2.5 to 3.5 years of age and grow antlers to 40% to 50% of their potential..." is one option under DMAP that embodies QDM. One of the key ideas that is stressed to landowners and hunting clubs by Louisiana biologists is to manage within the capabilities of the habitat. If the best that can be achieved is an eight-point buck with a 13" inside spread, be satisfied with that and enjoy the program.

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1ST NATIONAL BOWHUNTING CONFERENCE

By Larry Savage, LDWF

The first National Bowhunting Conference was held in St. Louis, Missouri on February 16-18, 2001. One hundred and seventy attendees included bowhunters and representatives for bowhunting organizations, state wildlife agencies and Archery Manufacturers Organizations (AMO). Some in attendance were from as far away as Alaska and Hawaii. This group was treated to 25 presentations of the latest information on: (1) the impacts of technology on bowhunting, (2) the role of bowhunting in urban deer management, and (3) implications of wounding on bowhunting.

In one presentation a publication entitled "***BOWHUNTING IN THE U. S. – Insights into Bowhunters: their attitudes, motivations, and economics"*** was reviewed. It provided an interesting profile of bowhunters and the economic impact of bowhunting.

Bowhunter Profile

- While overall hunting participation in the U S has declined since the early 1980s, bowhunting has enjoyed a significant increase.
- The typical active bowhunter is a white male in his 20s or 30s with comparatively higher income and education than hunters in general.
- Bowhunters tend to be more enthusiastic and active than hunters in general.
- They usually hunt near home (89%), often alone, and report very high levels of satisfaction (91%).
- Being close to nature (86%), the challenge (78%) and relaxation (78%) are the major motivations and satisfactions.
- 94 % of bowhunters use compound bows.
- Bowhunters (97%) feel their sport is very safe.
- Deer are the preferred game – nearly all hunt deer at least one day per year.
- Most bowhunters come from the ranks of gun hunters.

Bowhunting Economics

- Bowhunters expenditures support more jobs than Ford Motors, which is the Fortune 500's third largest employer (bowhunting - 398,000 & Ford -371,000)
- Bowhunting expenditures occur in rural regions where the economic benefit is truly needed.
- Bowhunters spend up to 2.5 times more on hunting than a typical gun hunter.
- The average 1998 retail expenditure per bowhunter was $4,234 per U S bowhunter and $4,872 per Louisiana bowhunter.
- In 1998 retail expenditures from 3.2 million US bowhunters was $13 billion and from 50,000 Louisiana bowhunters was $244 million.

Big Game Recognition Program in Louisiana

By David Moreland

I have often heard it said that a trophy deer is all in the eyes of the hunter. However, there are standards that have been established to define a trophy deer. A major part of this definition concerns the weapon used by the hunter to bag the deer. Since it is somewhat easy to Areach out and touch@ with a modern firearm, the minimum standard established which defines a gun-killed trophy is much greater than that of a deer taken with bow and arrow.

In Louisiana the minimum standard for a gun-killed deer to qualify in the Louisiana Big Game Recognition Program is 150. The minimum standard for a bow-killed deer is 90. All habitat types in LA are capable of producing a buck that will score 100 points, consequently all of the state is capable of producing deer eligible to be recognized in the program--they just have to be killed with archery gear. Hunters familiar with Boone and Crockett and Pope and Young standards are aware that the Louisiana standards are well below these national standards.

A deer that scores 150 points is truly one with a large set of antlers. Because many quality deer are harvested each year

in the state that do not score that high, it has been requested that the minimum score for a gun-killed deer be reduced so that more of these bucks can be recognized. According to the 1999 Game Harvest Survey, most Louisiana deer hunters believe an eight-point buck with a 16" inside spread is a trophy deer.

Beginning with the 4th Louisiana Big Game Recognition Program, 2001-2003, the new minimum standard for a gun killed deer is 130 for the Typical Category and 165 for the Non-Typical Category. This new standard of 130 fits the definition of what hunters believe a trophy deer looks like. A good eight point with a 16" inside spread, 20" main beams, and 4" bases can score 130. Minimum standards for the bow and muzzleloader categories will remain the same.

Category	Recognition Program	La. State Record[a]	Boone and Crockett[b]
----------Deer Gun----------			
Typical	130	160	170
Non-Typical	165	185	195
----------Deer Archery----------			Pope and Young
Typical	90	110	125
Non-Typical	100	140	155
----------Deer Muzzleloader----------			Longhunter Society
Typical	110	120	130
Non-Typical	130	150	160
----------Wild Turkey----------			
	40	40	

[a]Also qualifies for Boone and Crockett Awards Program
[b]All-time record book

Anyone having a deer or turkey that may score high enough to recognition should contact the local LDWF office or the Deer Study Section in Baton Rouge.

The 3rd Big Game Recognition Program publication will be produced in the fall of 2001. Copies of the *1979-91 Louisiana Record Book, Louisiana Big Game Recognition Program 1992-94, Louisiana Big game Recognition Program 1995-97*, and the current state listing of big game records are available from the Deer Study Section.

"OLD DOG" WITH A NEW MANAGEMENT TRICK

By Larry Savage, LDWF

The expression "you can't teach an old dog a new trick" has finally been proven wrong. Mr. George Franklin, legendary doe protector from Richland Parish, has finally learned a new "deer management trick". In this case however, it took three-quarters of a century.

At age 75, Mr. George harvested his first doe with considerable moral support from grandsons Scott and Colton (both veteran doe harvesters). It was such a momentous occasion that he had to endure the "rites of passage" most often bestowed on young hunters killing their first deer. This, despite the fact that he has been pursuing and killing Lafourche Swamp bucks for 40 years.

In 1991, Mr. Franklin was the winner of the prestigious National Wetland Conservationist of the Year award for the innovative management of wetland habitat on his farm.

More recently, Mr. George has turned his attention toward quality deer management by participating with his family in four DMAP units in Morehouse, Ouachita & Richland Parishes. Mr. George's personal deer management experience parallels Louisiana's deer management history. After 34 "windshield" tours of Germany from his B-17 ball turret position, Mr. George returned to Lafourche Swamp where deer tracks were a rarity. In 1955 LDWF began restocking efforts in Richland Parish, eventually releasing 72 deer from Red Dirt Game Management Area and Madison Parish. Mr. George remembers well going to Texas and buying 40 deer hounds to participate in the first modern season opener in the early1960s. LDWF bucks-only hunting seasons worked so well at increasing deer numbers during the early years that Mr. George continued this traditional hunting policy on his property until initiating DMAP in the mid-1990s.

OPERATION GAME THIEF

By Larry Savage, LDWF

In addition to predators, poachers can be a problem around deer feeders. This quality buck was shot at a feeder with a gun 1 day before the start of the 2000 archery season. The case is pending. Senoir Agent Dwayne Taylor, Enforcement Divistion, Ouachita Parish, investigated this crime. This represents the theft of 3 year's investment for a quality deer management program. Report all wildlife violations to:

Operation Game Thief (1-800-442-2511)

BEARS RELOCATED TO CONCORDIA PARISH WMA'S

By Paul Davidson, Black Bear Conservation Committee

Beginning in March, 2001, the Louisiana Department of Wildlife and Fisheries (LDWF), the U.S. Fish and Wildlife Service (USFWS), and the Black Bear Conservation Committee (BBCC) will move the first of twenty or more female Louisiana black bears to public lands in lower Concordia Parish. This project, an attempt to speed up the recovery of the federally listed Louisiana black bear, is a cooperative effort among the many stakeholders working together to restore Louisiana's bear population to viable numbers. This year, four female bears with their newborn cubs were removed from their winter dens in St. Mary and Madison Parishes and placed in prepared dens on the Red River Wildlife Management Area.
This method of moving bears has been successful in Tennessee, Kentucky, Arkansas, and Louisiana. It is believed that the maternal instinct overpowers the natural homing instinct possessed by bears and that they will remain near the release site. Moving bears in most other situations is rarely successful because the animals attempt to return to their previous home range.

It is likely that these bears or their offspring will eventually disperse onto public and private properties adjacent to or near the release site. Hunting seasons and other activities

Photo Courtesy of Paul Davidson, BBCC

will not be affected by the presence of bears. Should there be problems associated with the bears a conflict management team made up of staff from LDWF, USFWS, BBCC, and USDA Wildlife Services will be available to work with landowners, camp owners, and hunting clubs to resolve conflicts.

During the spring and summer of 2001, this group will meet with camp owners and others to help educate them on how to avoid problems. Most bear related problems center around the bear's search for food. Camp owners will need to make a special effort to remove edible garbage from the area around their camps and dispose of it elsewhere. Bears will search out sources of an easy meal and will return if rewarded with something to eat.

Hunters baiting deer with corn often have problems with bears raiding feeders and eating corn left for whitetails. Substituting soybeans or rice bran will generally solve the problem. Bears don't seem to be attracted to the other grains.

Managers are hopeful that moving bears into the central part of the state will speed up bear recovery efforts so that the animal can be considered viable enough to be removed from the list of endangered species.

There are several publications available to those wanting to learn more about the Louisiana black bear. Two brochures, *Living with the Black Bear in the Lower Mississippi Valley*, and *Hunting and Fishing around Bears in Louisiana* are free for the asking. They can be obtained by writing to the Black Bear Conservation Committee at P.O. Box 83881, Baton Rouge, LA 70884, or by calling (225) 763-5425.

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The DMAP Newsletter is printed twice a year to assist DMAP Cooperators with the intensive management of deer and habitat resources and to enhance the recreational enjoyment derived from these resources. It also updates cooperators with information on the administration of the program. **DMAP contact people that receive the newsletter directly are encouraged to pass it to as many of their members as possible.** Please forward any questions or comments about DMAP or the DMAP Newsletter to:

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